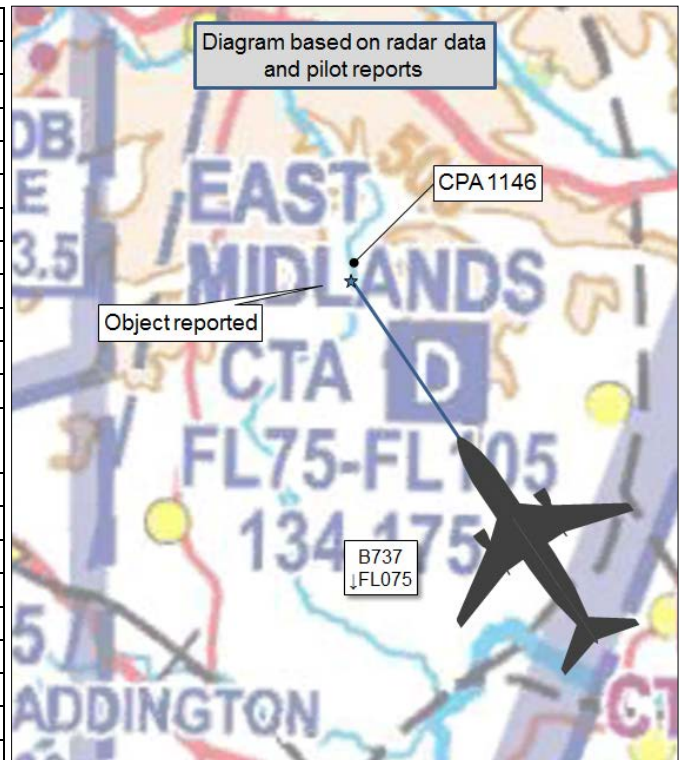


AIRPROX REPORT No 2016011

Date: 23 Jan 2016 Time: 1146Z Position: 5235N 00054W Location: IVO waypoint UPDUK

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	B737	Unknown
Operator	CAT	Unknown
Airspace	London FIR	London FIR
Class	D	D
Rules	IFR	
Service	Radar Control	
Provider	East Midlands	
Altitude/FL	FL075	
Transponder	A,C,S	
Reported		
Colours	White, Blue	Grey, Black
Lighting	Strobes, Landing, Nav	
Conditions	VMC	
Visibility	10km	
Altitude/FL	7500ft	
Altimeter	QNH	
Heading	355°	
Speed	220kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	50ft V/40m H	
Recorded		NK



THE B737 PILOT reports that, whilst on descent into East Midlands, the crew saw a large shiny metallic object, coloured grey/black. It was approximately 2m in diameter and passed over the right wing. By the time the crew saw it, it was too late to take avoiding action. They reported the event to Air Traffic Control. They were unable to say whether it was a drone or a balloon.

He assessed the risk of collision as 'High'.

THE OBJECT COULD NOT BE TRACED; there was no notification of any met balloons in the area.

Factual Background

The weather at East Midlands was recorded as follows:

METAR EGNX 231120Z 23011KT 9000 FEW005 09/07 Q1028=
METAR EGNX 231150Z 23012KT 210V280 9000 FEW010 10/07 Q1028=

Analysis and Investigation

UKAB Secretariat

The Air Navigation Order 2009 (as amended), Article 138¹ states:

A person must not recklessly or negligently cause or permit an aircraft to endanger any person or property.

¹ Article 253 of the ANO details which Articles apply to small unmanned aircraft. Article 255 defines 'small unmanned aircraft'. The ANO is available to view at <http://www.legislation.gov.uk>.

Article 166, paragraphs 2, 3 and 4 state:

(2) The person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made.

(3) The person in charge of a small unmanned aircraft must maintain direct, unaided visual contact with the aircraft sufficient to monitor its flight path in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions.²

(4) The person in charge of a small unmanned aircraft which has a mass of more than 7kg excluding its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight must not fly the aircraft:

(c) at a height of more than 400 feet above the surface unless it is flying in airspace described in sub-paragraph (a) or (b) and in accordance with the requirements for that airspace.

In addition, the CAA has published guidance regarding First Person View (FPV) drone operations which limit this activity to drones of less than 3.5kg take-off mass, and to not more than 1000ft².

Summary

An Airprox was reported when a B737 flew into proximity with an unknown object at 1146 on Saturday 23rd January 2016. The B737 pilot was operating under IFR in VMC and receiving a Radar Control Service from East Midlands.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the B737 pilot and radar photographs/video recordings.

The Board first debated the likely identity of the object. The reported size would indicate that it was quite large to have been a drone, although that couldn't be discounted, and they thought that it may probably instead have been a balloon of some kind. That being said, an accurate assessment of size from a fleeting glimpse was, at best, fraught with error. In the end, given that the report did not indicate that the object had rotors or was powered, the Board could not come to a conclusion about its classification. Notwithstanding the inability to definitively identify the object, it was clear that it had passed close to the B737 given the pilot's estimation was 50ft vertically and 40m horizontally. There was no prior indication or warning of the object, nor would any seem to have been possible, and therefore no opportunity for the pilot to increase separation prior to CPA. Members therefore unanimously agreed that a collision had been avoided purely by providence.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The pilot was concerned by the proximity of the unknown object.

Degree of Risk: A.

² ORSA No. 1108 Small Unmanned Aircraft – First Person View (FPV) Flying available at: [ORSA No 1108](#).